

Amendments to the Claims:

This listing of claims will replace all prior versions, and listings, of claims in the application:

Listing of Claims:

1-53 (cancelled)

54. (previously presented) An apparatus for printing images from digital image data onto a light sensitive medium disposed at an image plane, the apparatus comprising:

(a) a control logic processor capable of controlling the operation of said apparatus for printing based on said digital image data;

(b) an image forming assembly for directing, onto said light sensitive medium disposed at said image plane, an exposure beam for printing, said image forming assembly comprising:

(1) a light source for providing light exposure energy for imaging onto said light sensitive medium;

(2) a first lens assembly for directing said light exposure energy to a spatial light modulator;

(3) a beamsplitter which directs said light exposure energy to said spatial light modulator;

(4) a temperature profile control apparatus for controlling a temperature profile of said beamsplitter;

(5) said spatial light modulator having a plurality of individual elements capable of altering a polarization state of said light exposure energy to provide an exposure beam for printing, a state of each of said elements controlled by said control logic processor according to said digital image data; and

(6) a second lens assembly for directing said exposure beam onto said light sensitive medium.

55. (original) The apparatus of claim 54 wherein said temperature profile controller comprises a heat sink.

56. (original) The apparatus of claim 54 wherein said temperature profile controller comprises a thermo-electric cooler.

57. (previously presented) The apparatus of claim 54 wherein said temperature profile controller comprises a multi-element temperature controller.

58. (original) The apparatus of claim 54 wherein said temperature profile controller comprises a localized environmental controller.

59. (original) The apparatus of claim 54 wherein said temperature profile controller provides a uniform temperature profile.

60. (original) The apparatus of claim 54 wherein said temperature profile controller comprises a calculated profile.

61. (original) The apparatus of claim 54 wherein said second lens assembly comprises a polarizer.

62. (original) The apparatus of claim 54 wherein said second lens assembly comprises a beamsplitter.

63. (original) The apparatus of claim 54 wherein said second lens assembly comprises a zoom lens.

64. (original) The apparatus of claim 54 wherein said second lens assembly comprises a turret with at least two lenses.

65. (original) The apparatus of claim 54 wherein said spatial light modulator is movable to at least two distinct locations.

81. (currently amended) A method as in claim 80 83 wherein said light source comprises at least two distinct wavelengths.

82. (currently amended) A method as in claim 80 83 wherein backplane voltage of said modulator is varied as a function of illumination wavelength.

83. (currently amended) ~~A method as in claim 80~~ A method of printing two dimensional swaths of area onto a light sensitive media using a spatial light modulator, the method comprising:

imaging light from a light source;
sequentially illuminating a first lens assembly;
passing light from said first lens assembly through a beamsplitter;
directing said light to said modulator wherein said modulator is temperature controlled;
imaging said light through a second lens assembly to light sensitive media; and
wherein said illumination is turned off, allowing residual images to decay, turning illumination back on, printing an additional two-dimensional image.

84. (currently amended) A method as in claim 80 83 where in the spatial light modulator is moved to at least 2 distinct positions and imaged to create a composite image.

85. (currently amended) The method of claim 80 83 wherein the step of modulating said spatial light modulator comprises the step of varying the drive signal provided to an element of said spatial light modulator.

86. (currently amended) The method of claim ~~80~~ 83 wherein the step of directing said exposure beam comprises the step of magnifying said exposure beam.

87. (currently amended) The method of claim ~~80~~ 83 wherein the step of directing said exposure beam comprises the step of demagnifying said exposure beam.

88. (currently amended) The method of claim ~~80~~ 83 wherein the step of selecting an output format comprises the step of prompting for an operator response.

89. (currently amended) The method of claim ~~80~~ 83 wherein the step of modulating said uniformized source beam within a spatial light modulator in accordance with said digital data is further conditioned by said digital data to provide an exposure beam capable of printing a plurality of images at the same time.

90. (cancelled)

91. (currently amended) A method for printing as in claim ~~80~~ 83 comprising:

selecting a subset of individual modulator elements on said spatial light modulator proportional to said width dimension.

92-95. (cancelled)

96. (previously presented) A method for printing an image from digital image data onto a photosensitive medium, comprising:

(a) selecting, from a set of available layout formats, a selected format;

(b) correlating a grouping of exposure elements on a spatial light modulator with said selected format;

- (c) modulating said grouping of exposure elements based on said digital image data;
- (d) directing an exposure beam toward said spatial light modulator to provide an imaging beam;
- (e) directing said imaging beam toward said photosensitive medium; and
- (f) controlling a temperature profile of said spatial light modulator.

97. (original) The method for printing as in claim 96 wherein the step of selecting comprises the step of sensing a width dimension of said photosensitive medium.

98. (original) The method for printing as in claim 96 wherein a member of said set of available layout formats uses a single image.

99. (original) The method for printing as in claim 96 wherein a member of said set of available layout formats uses a plurality of images.

100. (previously presented) A method for printing an image from digital image data onto a photosensitive medium, comprising:

- (a) selecting, from a set of available layout formats, a selected format;
- (b) correlating a grouping of exposure elements on each of a plurality of spatial light modulators with said selected format;
- (c) modulating said grouping of exposure elements on said each of said plurality of spatial light modulators based on said digital image data;
- (d) directing an exposure beam toward said spatial light modulators to provide an imaging beam;
- (e) directing said imaging beam toward said photosensitive medium; and
- (f) controlling a temperature profile of said each of said plurality of spatial light modulators.

101. (original) The method for printing as in claim 100 wherein said plurality of spatial light modulators are disposed on the same side of a beamsplitter element.

102. (original) The method for printing as in claim 100 wherein said plurality of spatial light modulators are disposed on different sides of a beamsplitter element.

103. (cancelled)